

that of the eastern glabrous type; but in its pubescence the western plant is so clearly distinguishable that it is worthy separation as a geographic variety which may be called

MAIANTHEMUM CANADENSE Desf., var. **interius**, n. var., plus minusve pilosum.—ONTARIO: Mungo Park Point, Lake Nipigon, 1912, *H. E. Pulling*. MANITOBA: Lake Winnipeg, *Richardson*; Observation Point, Lake Winnipeg, July 23, 1884, *J. Macoun*; Winnipeg Valley, 1859, *Bourgeau*. SASKATCHEWAN: Carleton House to Cumberland House, July, 1827, *Drummond*. ALBERTA: Strathcona, June 21, 1903, *M. A. Barber*, no. 189. SOUTH DAKOTA: Piedmont and Little Elk Creek, alt. 4000 ft., June 27, 1892, *Rydberg*, no. 1043 (TYPE in Gray Herb.). IOWA: Fayette, May, 1894, *B. Fink*. WISCONSIN: Brown County, June 22, 1892, *J. H. Schuette*. ILLINOIS: Fountaindale, Winnebago County, 1870, "a rare plant with us," *M. S. Bebb*; Starved Rock, La Salle County, June, 1909, *Greenman, Lansing, & Dixon*, no. 34; Lake Villa, August 3, 1906, *Gleason & Shobe*, no. 103; Chicago, *H. A. Warne*.

GRAY HERBARIUM.

THE NORTH AMERICAN VARIATIONS OF *ARCTOSTAPHYLOS UVA-URSI*.

M. L. FERNALD AND J. FRANCIS MACBRIDE.

ARCTOSTAPHYLOS UVA-URSI, as it occurs in North America, seems to fall into three somewhat pronounced geographic variants differing primarily in the pubescence of the branches. The shrub which most clearly matches the European material has the very young branchlets minutely tomentulose and commonly somewhat viscid, but soon loses its pubescence. This typical form of the species is less common in North America than one of the others, but occurs in characteristic aspect from Greenland to Newfoundland and Quebec, and from the Bering Sea region locally southward to the Black Hills, New Mexico and Washington. This is the shrub described by Klotzsch as *Daphnidostaphylis Fendleriana* Klotzsch, *Linnaea*, xxiv. 80 (1851), and although the Fendler material is more glutinous than most of the European material, it is well matched by a sheet of specimens from the Pyrenees.

The commonest variety in North America is a shrub with the branches invested with a dense canescent almost felt-like minute tomentum, which is persistent, at least for several years. This variety, which is apparently restricted to North America, does not extend so far north as the typical form of the species, but is very general through the southern half of its range, especially in the East.

The most extreme variation is a shrub of western Canada and Montana and the north shore of the Gulf of St. Lawrence, which has the branchlets loosely villous, the trichomes viscid and commonly mixed with stipitate glands. These three variants seem so pronounced and to have such well-defined ranges, that it is desirable to designate them as definite geographical varieties.

ARCTOSTAPHYLOS UVA-URSI (L.) Spreng., var. **coactilis**, n. var., ramulis canescento-tomentulosis, non viscosis, tomentulo persistente.

Branchlets canescent-tomentulose, not viscid, the minute tomentum persistent.—Newfoundland to Yukon, south to Virginia, Indiana, Illinois, and in the mountains to Colorado and northern California. The following, among the numerous specimens examined, are cited as typical. NEWFOUNDLAND: gravelly terrace of Exploits River, Grand Falls, August 12, 1911, *Fernald, Wiegand & Darlington*, no. 6029; dry limestone barrens, Ingornachoix Bay, August 1, 1910, *Fernald, Wiegand & Kittredge*, no. 3847. QUEBEC: sandhills, Coffin Island, Magdalen Islands, July 19, 1912, *Fernald, Bartram, Long & St. John*, no. 7910. PRINCE EDWARD ISLAND: sandhills, Bothwell, August 24, 1912, *Fernald, Long & St. John*, no. 7911. NOVA SCOTIA: dry open soil, Kentville, August 22, 1902, *Fernald*. MAINE: dry bank, Pembroke, August 15, 1909, *Fernald*, no. 2040; open sandy woods, Brunswick, May 18, 1899, *E. B. Chamberlain* (TYPE, in Gray Herb.). NEW HAMPSHIRE: Newington, May 26, 1890, *C. H. Morss*; dry, open ground, Peterboro, June 12, 1908, *Rand & Robinson*, no. 443. MASSACHUSETTS: rocky hill, Waltham, May 1, 1898, *E. F. Williams*; Plymouth, April 25, 1865, *Wm. Boott*; Chilmark, April 25, 1897, *S. Harris*. RHODE ISLAND: East Providence, April 28, 1906, *E. S. Reynolds*, no. 0618. CONNECTICUT: dry granite rocks, Guilford, May 8 and August 14, 1906, *G. H. Bartlett*. VIRGINIA: near Luray, August 25, *Steele*, no. 211. ONTARIO: Battersea, August 18, 1898, *J. Fowler*. INDIANA: dry pine-barrens, Edgemoor, July 24, 1906, *Lansing*, no. 2600. ILLINOIS: dry sand-ridges, Waukegan, August 17, 1906, *Gleason & Shobe*, no. 343. MICHIGAN: bare dune, Hamlin Lake, Ludington, 1910, *Chaney*, no. 164. WISCONSIN: Camp Douglas, August 12, 1891, *E. A. Mearns*. MANITOBA: Lake Winnipeg Valley, 1857, *Bourgeau*. WYOMING: Tabernacle Butte, August 31, 1894, *Nelson*, no. 1126; open steep slopes, Sheep Mountain, Sept. 2, 1903, *Goodding*, no. 2094. COLORADO: *Clements*, no. 82. YUKON: 1898—

1901, *Maclean*. BRITISH COLUMBIA: shore of Howser Lake, Selkirk Mts., June 17, 1905, *Shaw*, no. 707. IDAHO: Craig Mts., Nez Perces County, May 20, 1892, *Sandberg, MacDougal & Heller*, no. 204. WASHINGTON: Hangman Creek, Spokane County, May 24, 1893, *Sandberg & Leiberg*, no. 69. CALIFORNIA: Humboldt Bay, May, 1901, *H. P. Chandler*, no. 1133.

A. UVA-URSI, var. **adenotricha**, n. var., ramulis petiolisque viscoso-villosis, pilis cum glandulis nigris stipitatis mixtis.

Branchlets and petioles viscid-villous, the pubescence mixed with stipitate black glands.—Saguenay County, Quebec, Saskatchewan, British Columbia and northwestern Montana. QUEBEC: Seven Islands, August 4, 1907, *C. B. Robinson*, no. 732; Mingan, June, 1909, *C. W. Townsend*. SASKATCHEWAN: 1857–8, *Bourgeau*. BRITISH COLUMBIA: high rocks above Emerald Lake, July 4, 1904, *C. H. Shaw*, no. 5200, in part; stony hillside, Golden, May 11, 1888, *C. F. Batchelder* (TYPE, in Gray Herb.). MONTANA: Spanish Creek, Gallatin County, Sept. 20, 1901, *J. Vogel*.

GRAY HERBARIUM.

CAREX MARITIMA IN MARSHFIELD, MASSACHUSETTS.—On July 4, 1914, Judge J. R. Churchill and I found specimens of *Carex maritima* O. F. Mueller, growing in the landward edge of the salt-marsh near the Marshfield station. The plants were small, not over half the size of the average specimens I have seen on the Maine coast. This is a southward extension of range of about thirty miles. The southernmost station given by the Local Flora Committee is Cambridge.—CLARENCE H. KNOWLTON, Hingham, Massachusetts.

CAREX LEPTONERVIA A VALID SPECIES.—Since the publication of the northernmost representative of *Carex laxiflora* Lam. as *C. laxiflora*, var. *leptonervia* Fernald, RHODORA, viii. 184 (1906), the writer has watched the plant with great care both in the field and in the herbarium and has found it so constant in its characters and so pronounced in its range that he is satisfied that it is a Canadian species quite distinct from the more southern complex comprising *C. laxiflora* and the other plants which are often placed with it as varieties. In all these southern plants, which reach their northeastern limit in New England or adjacent Canada, the perigynium is strongly nerved, but in *C. leptonervia* the smaller perigynium is nerveless or essentially so. The latter plant, as originally indicated, belongs to a rather northern area,